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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/082,581	05/21/1998	KENJI NAGASE	980673	2888

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EXAMINER

WHIPKEY, JASON T

ART UNIT PAPER NUMBER

2612

DATE MAILED: 07/26/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

GC

Office Action Summary

Application No.

09/082,581

Applicant(s)

NAGASE, KENJI

Examiner

Jason T. Whipkey

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 May 2002.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 5, 7 and 8 is/are allowed.
- 6) ☒ Claim(s) 1-4 and 6 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 May 1998 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
 If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
 a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments with respect to claims 1-3 have been considered but are moot in view of the new grounds of rejection.
2. Applicant's arguments with respect to claim 6 have been fully considered but they are not persuasive.
3. In response to applicant's argument that Iwamoto fails to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., two capacitors) are not recited in the rejected claim. Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).
4. In response to applicant's arguments that Sawanobori does not discharge power source line S2 and that Iwamoto only has one boosting circuit, the test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference; nor is it that the claimed invention must be expressly suggested in any one or all of the references. Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981).

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The combined teachings of the references suggest that by using a power supply circuit such as the one disclosed by Iwamoto — with two output terminals separated with a boosting capacitor C2 — connected to a CCD with two input terminals such as the one disclosed by Sawanobori, charge may be removed from the inputs to a CCD, thus preventing damage.

Claim Objections

5. The objection to claim 7 is withdrawn.

Specification

6. The changes to the specification are approved.

Claim Rejections - 35 USC § 112

7. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

8. Claims 1-4 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

9. Claim 1 recites the limitation "capacitors" on line 13. There is insufficient antecedent basis for this limitation in the claim. Only one capacitor is introduced in the claim. For examination purposes, the examiner will assume the applicant intended to include only one capacitor in the claim.

Claims 2-4 are rejected as being dependent on rejected claim 1.

Claim Rejections - 35 USC § 102

10. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

11. Claims 1-3 are rejected under 35 U.S.C. 102(b) as being anticipated by Deaver.

Regarding claim 1, Deaver discloses a discharge circuit for capacitors in a power supply. The power supply shown in the figure includes a first circuit that generates a positive polarity voltage, consisting of the two diodes shown on the right of full-wave rectifier 12 and connected to the positive node. This node is connected to a capacitor 14. The positive polarity voltage is output via terminal +VOUT.

The power supply also includes a second circuit that generates a negative polarity voltage, consisting of the two diodes shown on the left of full-wave rectifier 12 and connected to the negative node. This node is connected to a capacitor 16. The positive polarity voltage is output via terminal +VOUT. The transformer 10 is center-

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tapped to ground. When the AC voltage is removed capacitor 24 charges, which allows current to flow through the emitter-collector junction of PNP bipolar junction transistor 28 (column 3, lines 62-65). This discharges capacitors 14 and 16 (column 3, lines 66-67).

Regarding claims 2 and 3, transistor 28 is a switching element, and resistor 30 is a current-limiting element. Both are located between the positive and negative terminals.

Claim Rejections - 35 USC § 103

12. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

13. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Iwamoto in view of Sawanobori.

Iwamoto discloses a power supply circuit with a circuit generating a positive polarity voltage (3 and the node connecting to terminal V_{DD} ; see column 2, lines 58-64), a terminal for outputting the positive voltage (V_{DD}), a circuit generating a negative polarity voltage (3, the node connecting to terminal V_{SS1} ; see column 2, lines 58-64), a terminal for outputting the negative voltage (V_{SS2} , when SW3 and SW4 are closed), and a short circuit for short circuiting the first and second terminals (SW5).

Iwamoto is silent with regard to using the power supply circuit with a CCD imager.

Sawanobori discloses a CCD (17) connected to a power supply (14) that produces a negative and positive voltage and discharges the CCD upon power off (lines 17-19 of the "constitution" section). As stated on line 19, this serves the purpose of preventing the destruction of the CCD. For this reason, it would have been obvious to one skilled in the art at the time of the invention to have Sawanobori's CCD used with Iwamoto's power supply.

Allowable Subject Matter

14. Claim 4 would be allowable if rewritten to overcome the rejection under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

No prior art could be located that teaches or fairly suggests a power supply that includes a chopper circuit producing a low positive voltage feeding into a fly-back circuit producing a high positive voltage with a diode connected between the terminals.

15. Claims 5, 7, and 8 are allowed.

Regarding claims 5 and 8, no prior art could be located that teaches or fairly suggests a power supply that includes a chopper circuit producing a low positive voltage feeding into a fly-back circuit producing a high positive voltage with a diode connected between the terminals.

Regarding claim 7, no prior art could be located that teaches or fairly suggests a power supply as described above that is also connected to a CCD.

Conclusion

16. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

17. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason T. Whipkey, whose telephone number is (703) 305-1819. The examiner can normally be reached Monday through Friday from 8 A.M. to 5:30 P.M. eastern daylight time, alternating Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wendy R. Garber, can be reached on (703) 305-4929. The fax phone

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number for the organization where this application or proceeding is assigned are (703) 872-9314 for both regular communication and After Final communication.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office, whose telephone number is (703) 306-0377.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks
Washington, D.C. 20231

or faxed to (703) 872-9314 for either formal or informal communications intended for entry. (For informal or draft communications, please label "**PROPOSED**" or "**DRAFT**".)

Hand-delivered responses should be brought to the sixth floor receptionist of Crystal Park II, 2121 Crystal Drive in Arlington, Virginia.

JTW

JTW

July 25, 2002



TUAN HO
PRIMARY EXAMINER